UNITED STATES PATENT AND TRADEMARK OFFICE

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EXAMINER
KAO, JUTAI

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>22 January 2008</u>.

2a)☒ This action is **FINAL**.   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1-6</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>1-6</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on <u>22 January 2008</u> is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☐ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application

6)☐ Other: _____.

DETAILED ACTION

Response to Amendment

Amendments filed on 01/22/2008 are entered into prosecution for the purpose of

this office action. The amendments do not introduce any new matters and cure all

objections raised in the previous action.

Response to Arguments

1.   Applicant's arguments filed on 01/22/2008 have been fully considered but they

are not persuasive.

Regarding claim 1 and 2, the applicant first argues that Wu does not disclose that

failed links become inactive and protection line becomes active. However, as shown in

the previous rejection, the identifier of the working line is reassigned to the protection

line when the working line fails. Therefore, the working line becomes inactive in view of

the system since all data is routed by the identifier and thus to the protection line. That

is, the lines are switched between active and inactive state by the reassignment of

identifier and updating the cross connect table, as explained in the previous action.

The applicant also argues that Wu does not disclose that a physical identifier

being allocated to each serial line. However, as shown in the previous action,

paragraph [0013] and Fig. 2 of Wu does disclose a number of working lines with

physical identifiers.

The applicant further argues that Wu does not disclose allocating logical identifier

for each group of serial lines, which the previous action showed that it does by

assigning the same logical identifier to the working line and the corresponding

protection line. The applicant further talks about the advantage of time efficiency of the

embodiment of the current invention, which is not stated in the claim and thus not

considered.

The applicant also argues that Wu does not disclose communicating with

management means in order to determine the active serial line. However, the previous

action does show that communication is performed in the form of remapping the cross

connect table on the translation module, which represents the management means.

That is, the translation module is informed of the need to remapping and rewrites its

cross connect table.

Lastly, the applicant argues the combination of Wu and Khalil does not show the

transmission of messages to and from the application and the redundant system and

substituting the logical identifiers and physical identifiers. The specific relationship

between the transmission and substitution was unclear in the original claim, but the

claim has been clarified by the amendments. However, Khalil does show the

transmission of messages to and from application to the transmission medium (see

paragraph [0011]) and the substitution of logical and physical identifiers (shown in

previous rejection). The transmission medium in Wu's invention is the redundant

system of working and protection lines. Therefore, the combination of Wu and Khalil

does cover the claimed limitation.

Regarding claims 3-6, Wu and Khalil covers all limitations similar to those in

claim 1 as shown above. The applicant further argues that Bortoloso does not cover the

detail of the switching process. However, Bortoloso was only introduced to cover the

server-client setup. Wu and Khalil cover all details of the switching process as shown in

the previous action and the arguments above. Therefore, the rejection made in the

previous action is maintained.

All rejections made in the previous action are maintained and the action is made

final.

Claim Rejections - 35 USC § 103

1.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

2.   Claim 1 and 2 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Wu (US 2005/0036493) in view of Khalil (US 2003/0002468).

Wu discloses a method and an apparatus to facilitate independent protection

switching in a distributed network including the following features.

Regarding claim 1, a process for communication with a redundant system (see

"working lines" and "protection lines" recited in paragraph [0013]), comprising: one

group of redundant serial lines (see "working lines" and "protection lines" recited in

paragraph [0013]; and all lines W1, Wn, P1, etc. in Fig. 2), a serial line of said group

being an active line, the other serial line of said group being an inactive line (see "a

working line and a separately provided protection line in the event of a line failure of the

working line" recited in paragraph [0006]; that is, there are an active working line and an

inactive backup protection line in the system); means for managing the redundancy (see

"translation module" recited in paragraph [0013]) by controlling the switching of the

serial lines from an active to an inactive state and vice versa (see "When a line failure

occurs in the physical line...the physical signals are rerouted onto the protection line"

recited in paragraph [0013]; thus failed line becomes inactive and protection line

becomes active) wherein, first allocating each serial line in a physical identifier (see

"Physical identifiers for the signals on a number of working lines..." recited in paragraph

[0013], thus each working line is allocated a physical identifier); second allocating each

group of serial lines in a logical identifier (see "fixing a logical identifier...mapping...a

first physical signal line to the logical identifier; and remapping...a second physical

signal line to the logical identifier" as recited in claim 1, thus the two physical signal lines

forms a group of lines having one logical identifier); communicating with management

means in order to determine the active serial lines (see "remapping comprises rewriting

the cross connect table" recited in claim 2; and see translation module 104...may

include a cross connect table" recited in paragraph [0012]; wherein the cross connect

table shows the physical signal line associated with the logical STS IDs; the physical

signal line mapped to the logical ID is thus the active line); associating the physical

identifier of the active serial line is associated with each logical identifier (see when the

signals arrive at the translation module, either on the working line or a protection line, they are mapped to the same logical egress identifier" recited in paragraph [0013]).

Regarding claim 2, wherein the association between logical identifier and physical identifier are stored in a correspondence table (see "cross connect table" recited in paragraph [0012], [0015] and claim 2).

Wu does not disclose the following features: regarding claim 1, transmitting the messages of an application to the redundant system, and substituting each logical identifier with the associated physical identifier; and substituting the messages of the redundant system are transmitted to the application, substituting each physical identifier with the associated logical identifier.

Khalil discloses a virtual private network identification extension including the following features.

Regarding claim 1, transmitting the messages (see "data is transmitted from an applications program...across the transmission medium..." recited in paragraph [0011]) of an application (see "The network software in the Network Layer" recited in paragraph [0016]) to the redundant system (see "physical address of the computer is a number given to computer's network adapter card" recited in paragraph [0015]; which is analogous to the line card having physical line ports in Wu's invention), and substituting each logical identifier with the associated physical identifier (see "TCP/IP protocol routes information packets using logical addressing. The network software in the Network Layer...a logical address in the TCP/IP network is translated into a corresponding physical address using the ARP...protocols in the Network Layer" recited

in paragraph [0016]); and transmitting (see "data is transmitted from an applications

program...across the transmission medium..." recited in paragraph [0011]) the

messages of the redundant system (see system of Wu having the redundant system of

transmission medium) are transmitted to the application, substituting each physical

identifier with the associated logical identifier (see "TCP/IP protocol routes information

packets using logical addressing. The network software in the Network Layer...a logical

address in the TCP/IP network is translated into a corresponding physical address using

the ...RARP...protocols in the Network Layer" recited in paragraph [0016], wherein the

RARP protocol is the reverse of the ARP protocol and translates physical address to the

logical address).

It would have been obvious to one of the ordinary skill in the art at the time of the

invention to modify the system of Wu using features, as taught by Khalil, in order to

provide translation and communication between the higher layer protocols with the

lower layer protocols.

3.   Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wu (US

2005/0036493) in view of Khalil (US 2003/0002468) and Bortoloso (US 2003/0120782).

Wu discloses a method and an apparatus to facilitate independent protection

switching in a distributed network including the following features.

Regarding claim 3, a device for communicating (see "line card" recited in

paragraph [0012]) with a redundant system (see "working lines" and "protection lines"

recited in paragraph [0013]) comprising: one group of redundant serial lines (see

"working lines" and "protection lines" recited in paragraph [0013]; and all lines W1, Wn,

P1, etc. in Fig. 2); a serial line of said group being an active line, the other serial line of

said group being an inactive line (see "a working line and a separately provided

protection line in the event of a line failure of the working line" recited in paragraph

[0006]; that is, there are an active working line and an inactive backup protection line in

the system); means for managing the redundancy (see "translation module" recited in

paragraph [0013]) by controlling the switching of the serial lines from an active to an

inactive state and vice versa (see "When a line failure occurs in the physical line...the

physical signals are rerouted onto the protection line" recited in paragraph [0013]; thus

failed line becomes inactive and protection line becomes active) wherein, allocates a

physical identifier to each serial line (see "Physical identifiers for the signals on a

number of working lines..." recited in paragraph [0013], thus each working line is

allocated a physical identifier); allocates a logical identifier to each group of serial lines

(see "fixing a logical identifier...mapping...a first physical signal line to the logical

identifier; and remapping...a second physical signal line to the logical identifier" as

recited in claim 1, thus the two physical signal lines forms a group of lines having one

logical identifier); communicates with the management means in order to determine the

active serial lines (see "remapping comprises rewriting the cross connect table" recited

in claim 2; and see translation module 104...may include a cross connect table" recited

in paragraph [0012]; wherein the cross connect table shows the physical signal line

associated with the logical STS IDs; the physical signal line mapped to the logical ID is

thus the active line); associates the physical identifier of the active line with each logical

identifier (see when the signals arrive at the translation module, either on the working line or a protection line, they are mapped to the same logical egress identifier" recited in paragraph [0013]).

Wu does not disclose the following features: regarding claim 3, a server application and one client application communicating together, in which the server application: transmits the messages of the client application to the redundant system, substituting each logical identifier with the associated physical identifier; and transmits the messages of the redundant system to the client application, substituting each physical identifier with the associated logical identifier.

Bortoloso discloses a computer system for client server inter process communication including the following features.

Regarding claim 3, a server application (see Fig. 1, server application 13) and one client application communicating together (see Fig. 1, server application 13 connected to client application 12 via communication bus 14 and 15).

Khalil discloses a virtual private network identification extension including the following features.

Regarding claim 3, transmits the messages (see "data is transmitted from an applications program...across the transmission medium..." recited in paragraph [0011]) of the client application (see "The network software in the Network Layer" recited in paragraph [0016]) to the redundant system (see "physical address of the computer is a number given to computer's network adapter card" recited in paragraph [0015]; which is analogous to the line card having physical line ports in Wu's invention), substituting

each logical identifier with the associated physical identifier to the redundant system

(see "TCP/IP protocol routes information packets using logical addressing. The network

software in the Network Layer...a logical address in the TCP/IP network is translated

into a corresponding physical address using the ARP...protocols in the Network Layer"

recited in paragraph [0016]); and transmits the messages of the redundant system to

the client application, substituting each physical identifier with the associated logical

identifier (see "TCP/IP protocol routes information packets using logical addressing.

The network software in the Network Layer...a logical address in the TCP/IP network is

translated into a corresponding physical address using the ...RARP...protocols in the

Network Layer" recited in paragraph [0016], wherein the RARP protocol is the reverse

of the ARP protocol and translates physical address to the logical address).

It would have been obvious to one of the ordinary skill in the art at the time of the

invention to modify the system of Wu using features, as taught by Bortoloso and Khalil,

in order to provide translation and communication between the higher layer protocols

with the lower layer protocols.

4.   Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wu (US

2005/0036493) in view of Khalil (US 2003/0002468) and Bortoloso (US 2003/0120782)

as applied to claim 3 above, and further in view of Ahmed (US 6,647,432).

Wu, Bortoloso and Khalil disclose the claimed limitations as shown in the

rejection made to claim 3.

Bortoloso also disclose the following features: wherein the server application communicates with several client applications (see Fig. 1, where server application 13 communicates with client applications 10, 11, and 12).

Wu, Botoloso and Khalil do not disclose the following features: regarding claim 4, the several client applications are of one and the same workstation.

Ahmed discloses a distributed framework for intertask communication between workstation applications including the following features.

Regarding claim 4, the several client applications are of one and the same workstation (see "a single workstation 10 can therefore simultaneously execute a plurality of different client application programs 20" as recited in column 32, line 19-21).

It would have been obvious to one of the ordinary skill in the art at the time of the invention to modify the system of Wu, Bortoloso and Khalil using features, as taught by Ahmed, in order to enhance the efficiency in the use of available bandwidth and computing resources.

5.   Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wu (US 2005/0036493) in view of Khalil (US 2003/0002468) and Bortoloso (US 2003/0120782) as applied to claim 3 above, and further in view of Stein (US 5,497,463).

Wu, Bortoloso and Khalil disclose the claimed limitations as shown in the rejection made to claim 3.

Wu, Botoloso and Khalil do not disclose the following features: regarding claim 5, wherein the server application operates continuously.

Stein discloses an ally mechanism for interconnecting non-distributed computing environment (DCE) and DCE systems to operate in a network system including the following features.

Regarding claim 5, wherein the server application operates continuously (The server side of the application is a dedicated process that runs continuously..." recited in column 9, line 38-41).

It would have been obvious to one of the ordinary skill in the art at the time of the invention to modify the system of Wu, Bortoloso and Khalil using features, as taught by Stein, in order to allow the server to be responsive to the client requests at all time.

6.   Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wu (US 2005/0036493) in view of Khalil (US 2003/0002468), Bortoloso (US 2003/0120782) and Ahmed (US 6,647,432) as applied to claim 4 above, and further in view of Stein (US 5,497,463).

Wu, Bortoloso, Khalil and Ahmed disclose the claimed limitations as shown in the rejection made to claim 4.

Wu, Botoloso Khalil and Ahmed do not disclose the following features: regarding claim 6, wherein the server application operates continuously.

Stein discloses an ally mechanism for interconnecting non-distributed computing environment (DCE) and DCE systems to operate in a network system including the following features.

Regarding claim 6, wherein the server application operates continuously (The server side of the application is a dedicated process that runs continuously..." recited in column 9, line 38-41).

It would have been obvious to one of the ordinary skill in the art at the time of the invention to modify the system of Wu, Bortoloso, Khalil and Ahmed using features, as taught by Stein, in order to allow the server to be responsive to the client requests at all time.

Conclusion

7.   **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JUTAI KAO whose telephone number is (571)272-9719. The examiner can normally be reached on Monday ~Friday 7:30 AM ~5:00 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Kwang Yao can be reached on (571)272-3182. The fax phone number for

the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the

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system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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